



"Carbon capture solutions for decarbonization"

FILIPPO LOSSANI
Director, Marine B.U., Ecospray



GREEN&BLUE INNOVATION HUB

COCDD AV

technologies for the planet



market leader
in EGCS for
Marine engines



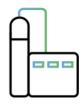
a global company
that is part of **Carnival Corporation**



5% R&D investment to turnover



2 labs for in-house validation of test protocols, a **3rd lab** for fuel cell tests



800+ systems installed worldwide

Ecospray started in 2005 as an engineering company. For 15 years we have made marine and industrial processes more sustainable with the cleaning and treatment of polluting emissions.

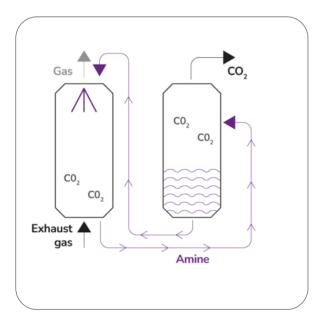
Today we offer a wide range of **technological solutions**, driven by the target of creating **clean energy for a zero-emission Planet** for every industry.



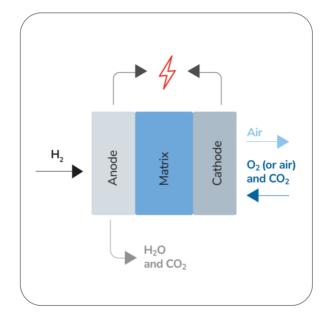


our Carbon Capture technologies

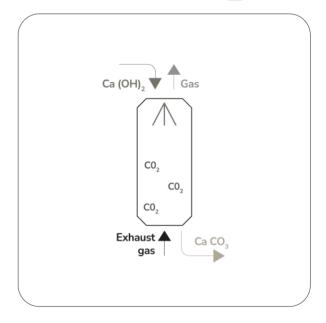
Amines



MCFC



$Ca(OH)_2$

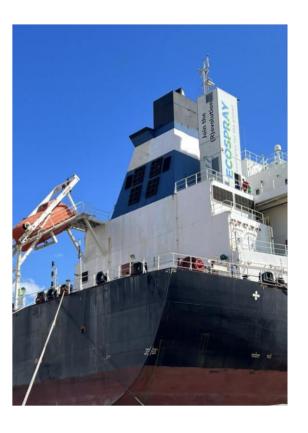










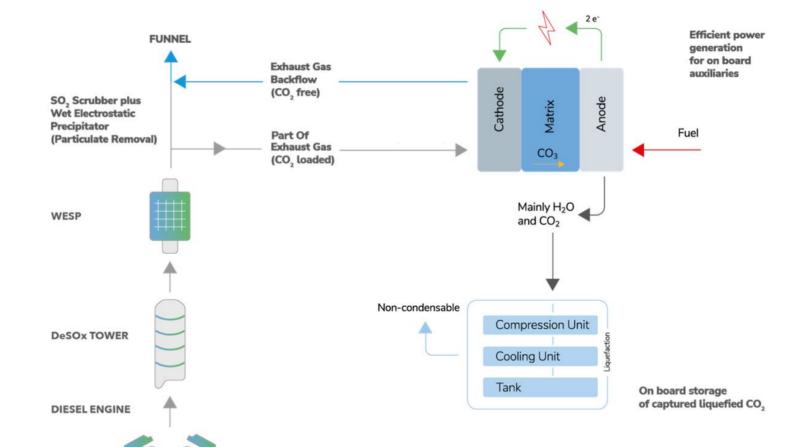








MCFC Onboard application









Case study

Target CO₂ emission reduction: 20%

> MCFC Fuel LNG - 250 kg/h Bio-LNG - 150 kg/h Super bio-LNG - 120 kg/h

MCFC SIZE

Matrix

 CO_3

and CO₂

Compression Unit

Cooling Unit

Tank

770 kW 590 kW

Cathode Air Mainly H₂O

> Captured CO₂ to liquefaction unit

(1% CO₂ concentration) O₂ (or air) and CO₂ Part of **Exhaust Gas**

(5% CO₂ concentration)

Exhaust Gas Backflow

16 MW Engine

FUNNEL

Liquefied CO₂ **Onboard storage**

> 1500 kg/h 950 kg/h 780 kg/h

1190 kW

Anode

technologies for the planet





CapLab

- Shared between Ecospray and the Department of Civil, Chemical and Environmental Engineering of the University of Genoa
- Aimed to the development of Electrochemical Cells for Carbon Capture & Energy Transition (Molten Carbonate Fuel Cells - MCFCs)
- Research areas: Capture of CO₂, production of clean energy, production and use of hydrogen, applications in maritime and landbased sectors, integration with renewable sources.











lossani@ecospray.eu

